

Soil and Water Remediation, Groundwater/Vadose Zone (RL-0030)

**R. T. Wilde, Vice President of Solid and
Waste Water Remediation/Groundwater
Vadose Zone & Waste Sampling and
Characterization Facility/(509) 372-8123**



*Fish sampling at control site near
Vernita Bridge*

*Sculpin, an example
of vertebrates
sampled at 100N*



*Example of Asian clams found
along the 100N shoreline.
(Width of actual picture is 4 cm.)*



Overview

This section addresses work in Project Baseline Summary RL-0030, *Soil and Waste Remediation Groundwater/Vadose Zone*.

NOTE: Unless otherwise noted, all information contained herein is as of the end of April 2005.

Notable Accomplishments

Well Drilling: Six of fifteen calendar year 2005 TPA milestone M-24-57 wells have been completed. Three additional TPA wells are in various stages of well drilling. Two of four characterization boreholes at the In-Situ Redox Manipulation barrier in the 100-D Area have been constructed and drilling had begun on the third borehole. Four wells for the 100-KR-4 calcium polysulfide treatability test were completed and accepted for use on April 29, 2005.

Well Decommissioning: There has been continued progress on the work to decommission wells that pose a high risk to provide a pathway for contamination to move directly to the groundwater. Work on fifty-four of the seventy high-risk wells is in progress. Twelve of the wells are completely decommissioned. Jet-shot perforation activity has been performed over 5012 feet of casing in 22 wells (36 percent of the total). A total of 562 feet of casing has been mechanically perforated using cutting tools. A total of 5089 feet of casing has been cemented.

Ecological Sampling: Benthic aquatic biota sampling (e.g. Asiatic clams) was completed for the 100-N Area ecological assessment and the samples submitted to the lab. Field screening suggests the highest concentrations occur in a limited stretch of shoreline centered around the old NPDES monitoring well (199-N-46). This information is valuable in planning for a new treatment approach to cleanup strontium-90 groundwater contamination in the area.

Deep Soil Zone Cleanup Technologies: A collection of scientists from national laboratories and academia met in Richland last week to evaluate potential treatment technologies for technetium-99 in the deep vadose zone. The panelists reviewed several technologies and concluded that a combined approach that restricts water infiltration into the ground combined with drying out the water currently associated with the contamination would be the path with the greatest probability of success. Their final report is expected by the end of June 2005.

FY 2005 Funds vs. Spend Forecast (\$M)

	Projected FY 2005 Funding	FY 2005 Fiscal Year Spend Forecast	Variance
Soil & Water Remediation, Groundwater/Vadose Zone	\$ 55.6	\$ 55.6	\$ 0.0

FY 2005 Schedule/Cost Performance (\$M)

	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance \$	Schedule Variance %	Cost Variance \$	Cost Variance %	Budget At Completion
Soil & Water Remediation, Groundwater/ Vadose Zone	\$28.1	\$24.8	\$25.8	-\$3.3	-11.6%	-\$1.0	-4.0%	\$49.6

Numbers are rounded to the nearest \$0.1M and include the Closure Services allocation.

FY 2005 Schedule/Cost Performance, continued

Schedule Performance (-\$3.3M/-11.6%). The unfavorable schedule variance is due to:

- Delayed award of the jet-shot and mechanical perforation decommissioning contracts.
- Drilling of four wells for the ISRM Barrier aquifer redox capabilities delayed due to late delivery of electronic equipment.
- 100 D Area Chromium plume remediation due to technology issues with the MR-3 system.

The schedule associated with well decommissioning will be recovered; field work started in mid-January 2005.

Cost Performance (-\$1.0M/-4.0%). The unfavorable cost variance is due to:

- Under estimated impact of growth within the Project (labor, training, occupancy, vehicles, etc.) .

Performance Analysis FYTD and Monthly (\$M)

